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# Household surveys

**Labour Statistics: Concepts, Sources and Methods** 

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Close

Household surveys and population censuses constitute the primary sources of ABS labour statistics on people and households. In addition to information about current and previous labour force participation, information collected also includes demographic data, such as age, sex, family characteristics and country of birth. Labour statistics collected about people

provide insight into the supply of labour to the Australian labour market.

Household surveys falling within the labour statistics program include:

- The monthly <u>Labour Force Survey (/statistics/labour/employment-and-unemployment/labour-force-australia/latest-release)</u> (LFS)
- <u>Characteristics of Employment (/statistics/labour/earnings-and-work-hours/ characteristics-employment-australia/latest-release)</u> - annual supplement to the LFS
- <u>Participation, Job Search and Mobility (/statistics/labour/employment-and-unemployment/participation-job-search-and-mobility-australia/latest-release)</u> annual supplement to the LFS
- Barriers and Incentives to Labour Force Participation (/statistics/labour/employmentand-unemployment/barriers-and-incentives-labour-force-participation-australia/latestrelease) - annual Multipurpose Household Survey topic collected within the LFS
- Retirement and Retirement Intentions (/statistics/labour/employment-andunemployment/retirement-and-retirement-intentions-australia/latest-release) -Multipurpose Household Survey topic collected within the LFS
- Work Related Injuries (/statistics/labour/earnings-and-work-hours/work-related-injuries/ latest-release) - Multipurpose Household Survey topic collected within the LFS
- <u>Digital Platform Workers (/statistics/labour/earnings-and-working-conditions/working-arrangements/aug-2022#digital-platform-workers)</u> <u>Multipurpose Household Survey topic collected within the LFS</u>

The ABS household survey program also includes other social surveys that contain a labour force status module. Other labour-related data include:

- <u>Pregnancy and Employment Transitions (https://www.abs.gov.au/AUSSTATS/abs@.nsf/allprimarymainfeatures/FF16E659A7EBD2C7CA25720F007D9193?opendocument)</u>
- voluntary work from the <u>General Social Survey (/statistics/people/people-and-communities/general-social-survey-summary-results-australia/latest-release)</u>
- disability and labour force participation from <u>Disability</u>, <u>Ageing and Carers</u>, <u>Australia (/ statistics/health/disability/disability-ageing-and-carers-australia-summary-findings/latest-release)</u>
- Education and Work, Australia (/statistics/people/education/education-and-work-australia/latest-release)
- Qualification and Work, Australia (/statistics/people/education/qualifications-and-work/ latest-release)
- employment and health status from the <u>National Health Survey (/statistics/health/health-conditions-and-risks/national-health-survey-first-results/2017-18)</u>
- employment status of migrants from <u>Characteristics of Recent Migrants</u>, <u>Australia (/ statistics/people/people-and-communities/characteristics-recent-migrants/latest-release)</u>

For specific information on each of these surveys, refer to the relevant methodology pages for each statistical release.

## Scope and coverage

The scope of ABS household surveys varies from survey to survey. The Census of Population and Housing has the broadest scope of all ABS household collections, and aims to collect information from all persons residing in Australia on Census night. The scope of the Labour Force Survey (LFS) is the civilian population aged 15 years and over, and while the Labour Force Supplementary Surveys (LFSSs) vary, their scope is generally narrower than that of the LFS. The target populations of Special Social Surveys (SSS) also vary.

Practical collection difficulties, low levels of response, high levels of sample loss and the small numbers involved have resulted in the exclusion of persons living in remote and sparsely settled parts of Australia from a number of household surveys (exceptions include: the Census of Population and Housing; the LFS; and some SSSs). The exclusion of these persons has only a minor impact on any estimates produced for individual states and territories, with the exception of the Northern Territory.

Some household surveys exclude all persons living in special dwellings from their scope. Special dwellings include hotels, motels, hospitals, prisons and boarding houses. Other household surveys exclude certain types of persons living in special dwellings: for example, institutionalised persons and boarding school pupils are excluded from the scope of most supplementary surveys.

Institutionalised persons are people selected in institutions such as hospitals and homes (including general homes, other hospitals, convalescent homes, homes for the aged, retirement homes, homes for the handicapped and orphanages), and prisons, apart from live-in staff that do not usually live in a private dwelling.

Coverage rules are generally applied in all household surveys to ensure that each person is associated with only one dwelling, and hence has only one chance of selection. The chance of a person being enumerated at two separate dwellings in the one survey is considered to be negligible. Some surveys remove certain dwellings from coverage but not from scope; the estimates still are intended to include these excluded dwellings. The estimation method used for the survey makes an adjustment to include these dwellings and persons in the final outputs.

## Collection methodologies

A number of methods are used by the ABS for collecting data. Those most commonly used

in labour-related surveys can be categorised into three basic groups:

- interview;
- · self-enumeration; and
- · documentary sources.

Historically, these collection methods have been manual, paper-based methods. Each of these methods has a corresponding electronic method, generally referred to as 'computer assisted'.

#### Interview

The interview method of data collection involves an interviewer contacting data providers, asking the questions, and recording the responses. Interviews can be personal, where the data provider is interviewed personally, or involving Any Responsible Adult (ARA), where the ARA responds on behalf of other survey units. Interviews can be conducted either face to face or over the telephone. Interviews are most commonly used in household surveys.

Personal interviewing involves each provider being questioned about his or her own details. The Any Responsible Adult (ARA), or proxy, method of interviewing is used in a number of ABS household surveys as an alternative to personal interviewing. This involves obtaining information about all the persons in a selected household who are in scope of the survey, from the first responsible adult with whom the interviewer makes contact (rather than speaking to each individual personally). The method is only used for collecting information on topics where other members of the household are likely to be able to answer the question. If the ARA is unable to supply all of the details for another individual in the household, a personal interview is conducted with that particular individual.

## Face to face interview (CAPI - Computer Assisted Personal Interviewing)

When performing a computer-assisted personal interview (CAPI), the interviewer takes a laptop computer to the interview and codes the data into the computer as it is provided. Advantages of this method of data collection are:

- more flexibility to move around the form and skip questions;
- higher response rates;
- interviewers are able to help respondents understand the questions, thereby allowing for the collection of more complex data;
- some edit checks are carried out at the time of the interview, thus improving data quality; and
- the overall timeliness of the survey is improved.

However, face to face interviews are expensive. Face to face interviews involve a trained interviewer visiting the provider to conduct the survey. There are costs involved in time and travel to reach the respondents; maintenance of the computer equipment; in the recruitment, training in the use of CAPI; management of an interviewer work force; and the actual interview time increases as responses are coded and edited at the time of the interview. Other disadvantages are that data can possibly be subject to bias caused by the interviewer's appearance and attitude, and that respondents may not feel free to disclose sensitive or private information to an interviewer.

#### Telephone interview (CATI - Computer Assisted Telephone Interviewing)

Computer Assisted Telephone Interviewing (CATI) involves responses being keyed directly into a computer by the interviewer as the providers are asked the survey questions over the telephone. This technique allows for:

- reduced costs compared to face to face interviews, as fewer interviewers are needed and there are no travel costs involved;
- telephone interviews potentially producing more timely results;
- some editing to be carried out immediately (which improves the data quality and decreases processing time);
- 'call scheduling' to take place. Respondents can be called at convenient times or when data is available. Also, if the phone is engaged, the system will reschedule the call, and follow-ups for additional information are relatively quick and inexpensive;
- questions to be sequenced so that only relevant questions are visible to the interviewer (therefore reducing interviewer errors); and
- monitoring of interviewing staff so that consistency of performance is higher.

As with other methods of data collection, there are some drawbacks associated with this approach. There are limits on the number and complexity of questions that can be asked and, because of the ease with which the respondent can terminate the interview, non-response and partial non-response can be higher than with face to face interviews.

Telephone interviewing is used in both ABS household and business surveys, and may be used in conjunction with face to face interviews. For example, in the Labour Force Survey (LFS) the first interview is generally conducted face to face and the remaining interviews are conducted by telephone if the provider agrees.

## Online self-completion (CAWI – Computer Assisted Web Interviewing)

Online self-completion of surveys was introduced in December 2012. Respondents were offered the option of self-completing the survey online, in place of a face-to-face or telephone interview. The online self-completion offer was later expanded to all private

households. Interviewer collection (both face-to-face and via telephone) continues to be available for those respondents where it is inappropriate for operational, technological or personal reasons.

The use of electronic returns produces a faster response than other self-enumeration methods. Questions can also be sequenced so that only the questions relevant to the respondent are visible. The disadvantages are: increased cost for development of the forms, maintenance of the related systems and security, and help-desk staff to support the use of the form. Also, this technique requires respondents to have computer access.

### Household surveys and collection methods

|  | Respondent modes  | Respondent selection                 |
|--|---|--------------------------------------|
| Labour Force Survey and<br>associated<br>Supplementary Surveys | Predominantly interviewer administered – first month often face-to-face, with telephone interview thereafter. Online self-enumeration offered as the primary response mode. | Any responsible adult.               |
| Multipurpose Household<br>Survey                               | Predominantly interviewer administered – first month often face-to-face, with telephone interview thereafter. Online self-enumeration offered as the primary response mode. | Personal interview – self-reporting. |
| Special Social Survey  | Interviewer administered – face to face or telephone interviewing.  | Personal interview – self-reporting. |
| Census of Population and<br>Housing                            | Self-enumeration – either pen and paper or on-line.   | Any responsible adult.               |

Intensive follow up procedures for non-response are in place for household surveys. Interviewers make a number of attempts to contact households at different times of the day and on different days during the week. For households unable to be contacted by telephone, a face-to-face visit is attempted. If the household can still not be contacted within the survey period after repeated attempts, and the dwelling has been verified as not vacant, the household is listed as a non-contact.

## Sample design

With the exception of the Census of Population and Housing, most ABS household surveys use probability sample designs, drawing their sample from the Monthly Population Survey (MPS) and the SSS samples, which are drawn from a 'Master Sample'. These household surveys all use a multi-stage, stratified sample design. Typically three stages are used; the first stage units (FSUs) are randomly selected areas the size of Statistical Area Level 1's (SA1s) - about 200 dwellings. The Master Sample consists of these FSUs.

The Master Sample is drawn from the Population Survey Framework, which is composed of three components: the private dwelling framework, the special dwelling framework, and the Aboriginal and Torres Strait Islander Communities framework. These three frames are generally non-overlapping, and therefore enable the selection of samples that represent the Australian population. The overlap occurs as there are some special dwellings within the Aboriginal and Torres Strait Islander Communities framework.

For more information about sample design and method of estimation, see the LFS methodology page.

#### Private dwelling framework

In general, private dwellings are structures built specifically for living purposes, such as houses, flats, home units, and any other structures used as private places of residence. A private dwelling can also be a caravan, a houseboat, a house attached to an office, or rooms above a shop. In practice, some dwellings such as caravan parks and marinas are listed on the special dwelling list.

In most areas of Australia, private dwelling sample selection is structured around the selection of fine geographic regions defined by the aggregation of mesh blocks. Mesh blocks are the finest unit in the Australian Statistical Geography Standard (ASGS), the ABS Geography Standard which replaced the previous standard in 2012. For more information about mesh blocks, see Australian Statistical Geography Standard (ASGS): Volume 1 - Main Structure and Greater Capital City Statistical Areas (cat. no. 1270.0.55.001).

The key geographic sampling unit in the new framework is called the Base Frame Unit. These Base Frame Units were created by combining contiguous mesh blocks in nearly all regions of Australia, and were created solely for the purpose of household survey sampling. Their intended role is to define the geographic area within which dwellings are organised into groups which are selected in a sample together. These selected dwellings within the selected Base Frame Units are termed the "cluster". The clusters vary in size from 5-15, reflecting the cost of enumeration. If an area is remote and costly to enumerate, it will have a cluster size at the upper-end of this range of cluster sizes.

Three special strata are adopted: Secure Apartment Buildings, Pre-Determined Growth, and Indigenous geography strata. There is a single special stratum of each type within a State/ Territory (at most), so the sample in these strata can cut across the area unit boundaries

Each area selection unit in the master sample is assigned an "area type" class based on the geography of Australia. A variety of geographic classifications defined by different sources are combined to derive the area type classes:

- ASGS: Greater Capital City Statistical Area (GCCSA);
- ABS Geography classifications: Remoteness area (RA), Section of state (SoS), Urban centre or locality (UCL); and
- Household Survey Methodology (HSM): Self representing Area (SRA) / non-SRA (based on estimated population density).

### Special dwelling framework

The special dwelling household framework is a list of 'special' dwellings, from which samples of special dwellings and their residents can be selected. Special dwellings are establishments which provide predominantly short-term accommodation for communal or group living, and often provide common eating facilities. They include hotels, motels, hostels, hospitals, religious institutions providing accommodation, educational institutions providing accommodation, prisons, boarding houses, short-stay caravan parks, and may include some Aboriginal and Torres Strait Islander communities that are not on the Aboriginal and Torres Strait Islander Community Frame. Some special dwellings are designed for a particular purpose (e.g. hospitals) and, as such, provide accommodation for specific groups of persons. Special dwellings each comprise a number of dwelling units. Currently, there are around 26,000 special dwellings on the frame.

The framework contains information about the occupancy of each special dwelling as it was on Census night.

The special dwelling framework is also stratified geographically, though at a broader level than the private dwelling framework. In many cases the demographic, social and labour force characteristics of the occupants of special dwellings are not typical of the population residing in private dwellings, and therefore it is necessary to sample special dwellings separately by placing them in separate strata within each geographic (sample design) region. This provides for more effective samples of persons within special dwellings and private dwellings, and the flexibility to select some samples which exclude all or some special dwellings, or to select samples in which special attention is paid to persons residing in particular special dwellings.

### **Aboriginal and Torres Strait Islander Community Frame**

The Aboriginal and Torres Strait Islander Community frame is a tool used to ensure adequate sample selection for this population. It can be thought of as an extension of the private dwelling frame. A Mesh Block is classified as a discrete community mesh block if it is deemed to have an Aboriginal or Torres Strait Islander community population of 75% or more, and lies in the non-metropolitan area of Queensland, South Australia and Western Australia or Northern Territory. This frame is constructed using information from the

Census of Population and Housing and other information covering the communities.

There are two sample groups included on this frame. Discrete Aboriginal and Torres Strait Islander communities (including any out-stations associated with them) are referred to as the 'community sample'. Dwellings in areas not covered by the community sample are referred to as 'non-community sample'. Information on the Aboriginal and Torres Strait Islander Community frame, community and non-community sample is contained in the ABS publication National Aboriginal and Torres Strait Islander Social Survey: User Guide, 2014–15 (cat. no. 4720.0).

The Aboriginal and Torres Strait Islander Communities frame is stratified geographically by State/Territory, with Torres Strait Islander communities in Queensland separately stratified.

## MPS and SSS master samples

From July 2018, there will be a single Master Sample covering the sample requirements for both the Monthly Population Survey (MPS) and the Special Social Surveys (SSS)'s. The 2018 Master Sample will be the first to make use of the Address Register, which is now also used to support the enumeration of the Census of Population and Housing. In addition, a new method of selection (known as Conditional Selection) will also operate from 2018 onward, which will support more flexible sampling methods. Conditional selection is a method of selecting survey samples that allows the ABS to effectively manage overlap between different surveys, to prevent any household from being selected for two or more surveys, while also allowing survey samples to be located nearby to each other in order to reduce survey costs.

The MPS sample and the SSS samples comprise Base Frame Units taken from the private dwelling framework, special dwellings, and Indigenous communities (IC) from the ICF. Most household surveys conducted by the ABS use samples drawn from the Master Sample.

The MPS consists of monthly LFS, the Multipurpose Household Survey (MPHS), and also various supplementary surveys conducted in conjunction with the LFS. Dwellings selected in the LFS sample remain in sample for eight consecutive months. The program of SSSs consists of large-scale periodic surveys covering a wide variety of topics.

Most SSSs have similar (though slightly smaller) survey scope to the MPS, so the requirements and structure of the samples are also similar. In terms of the geographic scope of MPS and SSSs, a key difference is that most SSSs exclude very remote areas. Most SSSs do not obtain sample from discrete Indigenous communities, or select persons in special dwellings.

To date, the SSS Base Frame Units do not include any Base Frame Units selected in the MPS sample, thereby preventing households selected for the MPS from also being selected for a SSS during the life of a specific sample design.

It has traditionally been the practice that the Master Sample is re-selected and redesigned every five years following the Census of Population and Housing. The move from Census-based master samples to Address Register-based designs enables more frequent updates, with the first Address Register-based sample expected to be in use for 3 years, from July 2018 to June 2021.

#### Sample selection

From 2018, the ABS is using an Address Register in the sample selection process for all of its household surveys.

The Address Register, which is also now used to support the enumeration of the Census of Population and Housing, is a list of all physical addresses (both residential and non-residential) in Australia. The main input to the register is the Geocoded National Address File (G-NAF), with continuing supplementation from other available address sources and from field work undertaken by ABS officers.

The ABS has developed this register as the central source of addresses used in the collection of information in response to the need for more efficient and effective household survey designs, including:

- the creation of a dwelling frame for the mail out areas of the 2016 Census; and
- the creation of quarterly frames for ABS household surveys.
- The Address Register Common Frame is a trusted and comprehensive data set of Australian address information. It contains current address text details, coordinate reference (or "geocode"), and address use information for addresses in Australia.

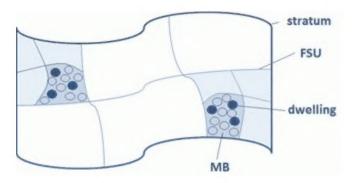
#### Stages of selection

There are three stages of selection:

- First Stage Units; then
- Base Frame Units (consisting of aggregates of Mesh Blocks); then
- Dwellings.

The Mesh Block is the finest ASGS 2016 geographical unit, typically containing 30-60 dwellings. First Stage Units are typically a set of contiguous Mesh Blocks. These stages of selection within a stratum are illustrated in Figure 17.1 below.

#### Three stages of selection



#### **Benchmarks**

Changes to the LFS population benchmarks impact primarily on the magnitude of the LFS estimates (i.e. employment and unemployment) that are directly related to the underlying size of the population.

Estimates of the population produced from household surveys are calculated in such a way as to add up to independently estimated counts (benchmarks) of the population. For the LFS, these benchmarks are based on Census of Population and Housing data, adjusted for under-enumeration and updated for births, deaths, interstate migration, and net permanent and long term migration. Benchmarks have been developed for state/territory of usual residence, part of state of usual residence (for example, capital city, rest of state), age and sex. Each cross-classification of these benchmark variables is known as a benchmark cell. Revisions are made to benchmarks after each Census of Population and Housing, and when the bases for estimating the population are reviewed.

Other household surveys use various combinations of benchmark variables to produce benchmark cells. Some surveys use supplementary information (such as LFS estimates), referred to in this context as pseudo-benchmarks, to supplement independent demographic benchmarks based on Census of Population and Housing data. Household surveys may use calibration methods to incorporate other auxiliary information on target populations into estimates - for instance, benchmarks for the Indigenous population or the population of private households.

## Non-response

Non-response arises when no information is collected from one or more occupants of a selected dwelling.

Interviewers make a number of attempts to contact households at different times of the day

and on different days during the week. For households and persons unable to be contacted by telephone, face-to-face visits are attempted. If the household still cannot be contacted within the survey period after repeated attempts (and if the dwelling has been verified as not vacant), it is listed as a non-contact. Non-contact is the most common form of non-response.

The response rate commonly quoted for ABS household surveys refers to the number of fully responding dwellings expressed as a percentage of the total number of selected dwellings excluding sample loss. Examples of sample loss for the LFS include:

- households where all persons are out of scope and/or coverage;
- · vacant dwellings;
- dwellings under construction;
- dwellings converted to non-dwellings;
- · derelict dwellings; and
- demolished dwellings.

For most household surveys, a non-response adjustment is performed implicitly by the estimation system, which effectively imputes for each non-responding person on the basis of all responding persons in the same post-stratum. This adjustment accounts for both full non-response and non-response for individual questions.